

## SEQUENCE LISTING

&lt;110&gt; BioImage A/S

<120> AN IMPROVED METHOD FOR EXTRACTING  
QUANTITATIVE INFORMATION RELATING TO AN INFLUENCE ON A  
CELLULAR RESPONSE.

&lt;130&gt; 22129PC1

&lt;160&gt; 18

&lt;170&gt; FastSEQ for Windows Version 3.0

&lt;210&gt; 1

&lt;211&gt; 1788

&lt;212&gt; DNA

&lt;213&gt; Aequorea victoria and mouse

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)...(1788)

&lt;400&gt; 1

atg ggc aac gcc gcc gcc gcc aag aag ggc agc gag cag gag agc gtg 48  
Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val  
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Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu  
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gac ccc tct cag aat aca gcc cag ttg gat cag ttt gat aga atc aag 144  
Asp Pro Ser Gln Asn Thr Ala Gln Leu Asp Gln Phe Asp Arg Ile Lys  
35 40 45

acc ctt ggc acc ggc tcc ttt ggg cga gtg atg ctg gtg aag cac aag 192  
Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys  
50 55 60

gag agt ggg aac cac tac gcc atg aag atc tta gac aag cag aag gtg 240  
 Glu Ser Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val  
 65 70 75 80

gtg aag cta aag cag atc gag cac act ctg aat gag aag cgc atc ctg 288  
 Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu  
 85 90 95

cag gcc gtc aac ttc ccg ttc ctg gtc aaa ctt gaa ttc tcc ttc aag 336  
 Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys  
 100 105 110

gac aac tca aac ctg tac atg gtc atg gag tat gta gct ggt ggc gag 384  
 Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu  
 115 120 125

atg ttc tcc cac cta cgg cgg att gga agg ttc agc gag ccc cat gcc 432  
 Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala  
 130 135 140

cgt ttc tac gcg gcg cag atc gtc ctg acc ttt gag tat ctg cac tcc 480  
 Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser  
 145 150 155 160

ctg gac ctc atc tac cgg gac ctg aag ccc gag aat ctt ctc atc gac 528  
 Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp  
 165 170 175

cag cag ggc tat att cag gtg aca gac ttc ggt ttt gcc aag cgt gtg 576  
 Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val  
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aaa ggc cgt act tgg acc ttg tgt ggg acc cct gag tac ttg gcc ccc 624  
 Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro  
 195 200 205

gag att atc ctg agc aaa ggc tac aac aag gct gtg gac tgg tgg gct 672  
 Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala  
 210 215 220

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ctc gga gtc ctc atc tac gag atg gct gct ggt tac cca ccc ttc ttc 720  
 Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe  
 225 230 235 240

gct gac cag cct atc cag atc tat gag aaa atc gtc tct ggg aag gtg 768  
 Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val  
 245 250 255

cgg ttc cca tcc cac ttc agc tct gac ttg aag gac ctg ctg cgg aac 816  
 Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn  
 260 265 270

ctt ctg caa gtg gat cta acc aag cgc ttt gga aac ctc aag gac ggg 864  
 Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asp Gly  
 275 280 285

gtc aat gac atc aag aac cac aag tgg ttt gcc acg act gac tgg att 912  
 Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile  
 290 295 300

gcc atc tat cag aga aag gtg gaa gct ccc ttc ata cca aag ttt aaa 960  
 Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys  
 305 310 315 320

ggc cct ggg gac acg agt aac ttt gac gac tat gag gag gaa gag atc 1008  
 Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile  
 325 330 335

cgg gtc tcc atc aat gag aag tgt ggc aag gag ttt act gag ttt ggg 1056  
 Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Thr Glu Phe Gly  
 340 345 350

cgc gcc atg agt aaa gga gaa gaa ctt ttc act gga gtt gtc cca att 1104  
 Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile  
 355 360 365

ctt gtt gaa tta gat ggc gat gtt aat ggg caa aaa ttc tct gtt agt 1152  
 Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val Ser  
 370 375 380

1152 1104 1056 1008 960 912 864 816 768 720

gga gag ggt gaa ggt gat gca aca tac gga aaa ctt acc ctt aaa ttt	1200
Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe	
385 390 395 400	
att tgc act act ggg aag cta cct gtt cca tgg cca acg ctt gtc act	1248
Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr	
405 410 415	
act ctc act tat ggt gtt caa tgc ttt tct aga tac cca gat cat atg	1296
Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met	
420 425 430	
aaa cag cat gac ttt ttc aag agt gcc atg ccc gaa ggt tat gta cag	1344
Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln	
435 440 445	
gaa aga act ata ttt tac aaa gat gac ggg aac tac aag aca cgt gct	1392
Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala	
450 455 460	
gaa gtc aag ttt gaa ggt gat acc ctt gtt aat aga atc gag tta aaa	1440
Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys	
465 470 475 480	
ggt att gat ttt aaa gaa gat gga aac att ctt gga cac aaa atg gaa	1488
Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met Glu	
485 490 495	
tac aat tat aac tca cat aat gta tac atc atg gca gac aaa cca aag	1536
Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro Lys	
500 505 510	
aat ggc atc aaa gtt aac ttc aaa att aga cac aac att aaa gat gga	1584
Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp Gly	
515 520 525	
agc gtt caa tta gca gac cat tat caa caa aat act cca att ggc gat	1632
Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp	
530 535 540	

ggc cct gtc ctt tta cca gac aac cat tac ctg tcc acg caa tct gcc 1680  
 Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala  
 545 550 555 560

ctt tcc aaa gat ccc aac gaa aag aga gat cac atg atc ctt ctt gag 1728  
 Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu Glu  
 565 570 575

ttt gta aca gct gct ggg att aca cat ggc atg gat gaa cta tac aaa 1776  
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 580 585 590

cct cag gag taa 1788  
 Pro Gln Glu \*  
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<210> 2

<211> 595

<212> PRT

<213> Aequorea victoria and mouse

<400> 2

Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val  
 1 5 10 15  
 Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu  
 20 25 30  
 Asp Pro Ser Gln Asn Thr Ala Gln Leu Asp Gln Phe Asp Arg Ile Lys  
 35 40 45  
 Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys  
 50 55 60  
 Glu Ser Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val  
 65 70 75 80  
 Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu  
 85 90 95  
 Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys  
 100 105 110  
 Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu  
 115 120 125

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Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala
  130                      135                      140
Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser
  145                      150                      155                      160
Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp
                      165                      170                      175
Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val
                      180                      185                      190
Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro
                      195                      200                      205
Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala
  210                      215                      220
Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe
  225                      230                      235                      240
Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val
                      245                      250                      255
Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn
                      260                      265                      270
Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asp Gly
                      275                      280                      285
Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile
  290                      295                      300
Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys
  305                      310                      315                      320
Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile
                      325                      330                      335
Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Thr Glu Phe Gly
                      340                      345                      350
Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile
                      355                      360                      365
Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val Ser
  370                      375                      380
Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe
  385                      390                      395                      400
Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr
                      405                      410                      415
Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met
                      420                      425                      430
Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln
  435                      440                      445

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Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala  
 450 455 460  
 Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys  
 465 470 475 480  
 Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met Glu  
 485 490 495  
 Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro Lys  
 500 505 510  
 Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp Gly  
 515 520 525  
 Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp  
 530 535 540  
 Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala  
 545 550 555 560  
 Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu Glu  
 565 570 575  
 Phe Val Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys  
 580 585 590  
 Pro Gln Glu  
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&lt;210&gt; 3

&lt;211&gt; 2751

&lt;212&gt; DNA

&lt;213&gt; Aequorea victoria and mouse

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)...(2751)

&lt;400&gt; 3

atg gct gac gtt tac ccg gcc aac gac tcc acg gcg tct cag gac gtg 48  
 Met Ala Asp Val Tyr Pro Ala Asn Asp Ser Thr Ala Ser Gln Asp Val  
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 gcc aac cgc ttc gcc cgc aaa ggg gcg ctg agg cag aag aac gtg cat 96  
 Ala Asn Arg Phe Ala Arg Lys Gly Ala Leu Arg Gln Lys Asn Val His  
 20 25 30  
  
 gag gtg aaa gac cac aaa ttc atc gcc cgc ttc ttc aag caa ccc acc 144

Glu Val Lys Asp His Lys Phe Ile Ala Arg Phe Phe Lys Gln Pro Thr	
35 40 45	
ttc tgc agc cac tgc acc gac ttc atc tgg ggg ttt ggg aaa caa ggc	192
Phe Cys Ser His Cys Thr Asp Phe Ile Trp Gly Phe Gly Lys Gln Gly	
50 55 60	
ttc cag tgc caa gtt tgc tgt ttt gtg gtt cat aag agg tgc cat gag	240
Phe Gln Cys Gln Val Cys Cys Phe Val Val His Lys Arg Cys His Glu	
65 70 75 80	
ttc gtt acg ttc tct tgt ccg ggt gcg gat aag gga cct gac act gac	288
Phe Val Thr Phe Ser Cys Pro Gly Ala Asp Lys Gly Pro Asp Thr Asp	
85 90 95	
gac ccc agg agc aag cac aag ttc aaa atc cac aca tac gga agc cct	336
Asp Pro Arg Ser Lys His Lys Phe Lys Ile His Thr Tyr Gly Ser Pro	
100 105 110	
acc ttc tgt gat cac tgt ggg tcc ctg ctc tat gga ctt atc cac caa	384
Thr Phe Cys Asp His Cys Gly Ser Leu Leu Tyr Gly Leu Ile His Gln	
115 120 125	
ggg atg aaa tgt gac acc tgc gac atg aat gtt cac aac cag tgt gtg	432
Gly Met Lys Cys Asp Thr Cys Asp Met Asn Val His Asn Gln Cys Val	
130 135 140	
atc aat gac cct agc ctc tgc gga atg gat cac aca gag aag agg ggg	480
Ile Asn Asp Pro Ser Leu Cys Gly Met Asp His Thr Glu Lys Arg Gly	
145 150 155 160	
cgg att tat ctg aag gct gag gtc act gat gaa aag ctc cac gtc acg	528
Arg Ile Tyr Leu Lys Ala Glu Val Thr Asp Glu Lys Leu His Val Thr	
165 170 175	
gta cga gat gca aaa aat cta atc cct atg gat cca aat ggg ctt tcg	576
Val Arg Asp Ala Lys Asn Leu Ile Pro Met Asp Pro Asn Gly Leu Ser	
180 185 190	
gat cct tat gtg aag ctg aaa cta atc cct gac ccc aag aat gag agc	624



Asp	Pro	Tyr	Val	Lys	Leu	Lys	Leu	Ile	Pro	Asp	Pro	Lys	Asn	Glu	Ser	
195				200				205								
aaa	cag	aaa	acc	aaa	acc	atc	cgc	tcc	aac	ctg	aat	cct	cag	tgg	aat	672
Lys	Gln	Lys	Thr	Lys	Thr	Ile	Arg	Ser	Asn	Leu	Asn	Pro	Gln	Trp	Asn	
210				215				220								
gag	tcc	ttc	acg	ttc	aaa	tta	aaa	cct	tca	gac	aaa	gac	cgg	cga	ctg	720
Glu	Ser	Phe	Thr	Phe	Lys	Leu	Lys	Pro	Ser	Asp	Lys	Asp	Arg	Arg	Leu	
225				230				235				240				
tct	gta	gaa	atc	tgg	gac	tgg	gat	cgg	acg	act	cgg	aat	gac	ttc	atg	768
Ser	Val	Glu	Ile	Trp	Asp	Trp	Asp	Arg	Thr	Thr	Arg	Asn	Asp	Phe	Met	
245				250				255								
gga	tcc	ctt	tcc	ttt	ggt	gtc	tca	gag	cta	atg	aag	atg	ccg	gcc	agt	816
Gly	Ser	Leu	Ser	Phe	Gly	Val	Ser	Glu	Leu	Met	Lys	Met	Pro	Ala	Ser	
260				265				270								
gga	tgg	tat	aaa	gct	cac	aac	caa	gaa	gag	ggc	gaa	tat	tac	aac	gtg	864
Gly	Trp	Tyr	Lys	Ala	His	Asn	Gln	Glu	Glu	Gly	Glu	Tyr	Tyr	Asn	Val	
275				280				285								
ccc	att	cca	gaa	gga	gat	gaa	gaa	ggc	aac	atg	gaa	ctc	agg	cag	aag	912
Pro	Ile	Pro	Glu	Gly	Asp	Glu	Glu	Gly	Asn	Met	Glu	Leu	Arg	Gln	Lys	
290				295				300								
ttt	gag	aaa	gcc	aag	cta	ggt	cct	gtt	ggt	aac	aaa	gtc	atc	agc	cct	960
Phe	Glu	Lys	Ala	Lys	Leu	Gly	Pro	Val	Gly	Asn	Lys	Val	Ile	Ser	Pro	
305				310				315				320				
tca	gaa	gac	aga	aag	caa	cca	tcc	aac	aac	ctg	gac	aga	gtg	aaa	ctc	1008
Ser	Glu	Asp	Arg	Lys	Gln	Pro	Ser	Asn	Asn	Leu	Asp	Arg	Val	Lys	Leu	
325				330				335								
aca	gac	ttc	aac	ttc	ctc	atg	gtg	ctg	ggg	aag	ggg	agt	ttt	ggg	aag	1056
Thr	Asp	Phe	Asn	Phe	Leu	Met	Val	Leu	Gly	Lys	Gly	Ser	Phe	Gly	Lys	
340				345				350								
gtg	atg	ctt	gct	gac	agg	aag	gga	acg	gag	gaa	ctg	tac	gcc	atc	aag	1104

Val Met Leu Ala Asp Arg Lys Gly Thr Glu Glu Leu Tyr Ala Ile Lys	
355 360 365	
atc ctg aag aag gac gtg gtg atc cag gac gac gac gtg gag tgc acc	1152
Ile Leu Lys Lys Asp Val Val Ile Gln Asp Asp Asp Val Glu Cys Thr	
370 375 380	
atg gtg gag aag cgc gtg ctg gcc ctg ctg gac aag ccg cca ttt ctg	1200
Met Val Glu Lys Arg Val Leu Ala Leu Leu Asp Lys Pro Pro Phe Leu	
385 390 395 400	
aca cag ctg cac tcc tgc ttc cag aca gtg gac cgg ctg tac ttc gtc	1248
Thr Gln Leu His Ser Cys Phe Gln Thr Val Asp Arg Leu Tyr Phe Val	
405 410 415	
atg gaa tac gtc aac ggc ggg gat ctt atg tac cac att cag caa gtc	1296
Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr His Ile Gln Gln Val	
420 425 430	
ggg aaa ttt aag gag cca caa gca gta ttc tac gca gcc gag atc tcc	1344
Gly Lys Phe Lys Glu Pro Gln Ala Val Phe Tyr Ala Ala Glu Ile Ser	
435 440 445	
atc gga ctg ttc ttc ctt cat aaa aga ggg atc att tac agg gat ctg	1392
Ile Gly Leu Phe Phe Leu His Lys Arg Gly Ile Ile Tyr Arg Asp Leu	
450 455 460	
aag ctg aac aat gtc atg ctg aac tca gaa ggg cac atc aaa atc gcc	1440
Lys Leu Asn Asn Val Met Leu Asn Ser Glu Gly His Ile Lys Ile Ala	
465 470 475 480	
gac ttc ggg atg tgc aag gaa cac atg atg gat gga gtc acg acc agg	1488
Asp Phe Gly Met Cys Lys Glu His Met Met Asp Gly Val Thr Thr Arg	
485 490 495	
acc ttc tgc gga act ccg gac tac att gcc cca gag ata atc gct tac	1536
Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr	
500 505 510	
cag ccg tac ggg aag tct gta gat tgg tgg gcg tac ggt gtg ctg ctg	1584

Gln Pro Tyr Gly Lys Ser Val Asp Trp Trp Ala Tyr Gly Val Leu Leu  
 515 520 525

tac gag atg cta gcc ggg cag cct ccg ttt gat ggt gaa gat gaa gat 1632  
 Tyr Glu Met Leu Ala Gly Gln Pro Pro Phe Asp Gly Glu Asp Glu Asp  
 530 535 540

gaa ctg ttt cag tct ata atg gag cac aac gtg tcc tac ccc aaa tcc 1680  
 Glu Leu Phe Gln Ser Ile Met Glu His Asn Val Ser Tyr Pro Lys Ser  
 545 550 555 560

ttg tcc aag gaa gcc gtc tcc atc tgc aaa gga ctt atg acc aaa cag 1728  
 Leu Ser Lys Glu Ala Val Ser Ile Cys Lys Gly Leu Met Thr Lys Gln  
 565 570 575

cct gcc aag cga ctg ggc tgc ggg ccc gag gga gag agg gat gtc aga 1776  
 Pro Ala Lys Arg Leu Gly Cys Gly Pro Glu Gly Glu Arg Asp Val Arg  
 580 585 590

gag cat gcc ttc ttc agg agg atc gac tgg gag aaa ctg gag aac agg 1824  
 Glu His Ala Phe Phe Arg Arg Ile Asp Trp Glu Lys Leu Glu Asn Arg  
 595 600 605

gag atc caa cca cca ttc aag ccc aaa gtg tgt ggc aaa gga gca gaa 1872  
 Glu Ile Gln Pro Pro Phe Lys Pro Lys Val Cys Gly Lys Gly Ala Glu  
 610 615 620

aac ttt gac aag ttc ttc acg cga gga cag cct gtc tta aca cca cca 1920  
 Asn Phe Asp Lys Phe Phe Thr Arg Gly Gln Pro Val Leu Thr Pro Pro  
 625 630 635 640

gat cag ctg gtc att gct aac ata gac caa tct gat ttt gaa ggg ttc 1968  
 Asp Gln Leu Val Ile Ala Asn Ile Asp Gln Ser Asp Phe Glu Gly Phe  
 645 650 655

tcg tat gtc aac ccc cag ttt gtg cac cca atc ttg caa agt gca gta 2016  
 Ser Tyr Val Asn Pro Gln Phe Val His Pro Ile Leu Gln Ser Ala Val  
 660 665 670

ggg cgc gcc atg agt aaa gga gaa gaa ctt ttc act gga gtt gtc cca 2064

Gly Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro  
 675 680 685

att ctt gtt gaa tta gat ggc gat gtt aat ggg caa aaa ttc tct gtt 2112  
 Ile Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val  
 690 695 700

agt gga gag ggt gaa ggt gat gca aca tac gga aaa ctt acc ctt aaa 2160  
 Ser Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys  
 705 710 715 720

ttt att tgc act act ggg aag cta cct gtt cca tgg cca acg ctt gtc 2208  
 Phe Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val  
 725 730 735

act act ctc act tat ggt gtt caa tgc ttt tct aga tac cca gat cat 2256  
 Thr Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His  
 740 745 750

atg aaa cag cat gac ttt ttc aag agt gcc atg ccc gaa ggt tat gta 2304  
 Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val  
 755 760 765

cag gaa aga act ata ttt tac aaa gat gac ggg aac tac aag aca cgt 2352  
 Gln Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg  
 770 775 780

gct gaa gtc aag ttt gaa ggt gat acc ctt gtt aat aga atc gag tta 2400  
 Ala Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu  
 785 790 795 800

aaa ggt att gat ttt aaa gaa gat gga aac att ctt gga cac aaa atg 2448  
 Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met  
 805 810 815

gaa tac aat tat aac tca cat aat gta tac atc atg gca gac aaa cca 2496  
 Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro  
 820 825 830

aag aat ggc atc aaa gtt aac ttc aaa att aga cac aac att aaa gat 2544

Met	Ala	Asp	Val	Tyr	Pro	Ala	Asn	Asp	Ser	Thr	Ala	Ser	Gln	Asp	Val
1				5					10					15	
Ala	Asn	Arg	Phe	Ala	Arg	Lys	Gly	Ala	Leu	Arg	Gln	Lys	Asn	Val	His
			20					25					30		
Glu	Val	Lys	Asp	His	Lys	Phe	Ile	Ala	Arg	Phe	Phe	Lys	Gln	Pro	Thr
		35					40					45			
Phe	Cys	Ser	His	Cys	Thr	Asp	Phe	Ile	Trp	Gly	Phe	Gly	Lys	Gln	Gly
	50					55					60				
Phe	Gln	Cys	Gln	Val	Cys	Cys	Phe	Val	Val	His	Lys	Arg	Cys	His	Glu
65				70						75				80	

[illegible]

Thr Gln Leu His Ser Cys Phe Gln Thr Val Asp Arg Leu Tyr Phe Val  
 405 410 415  
 Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr His Ile Gln Gln Val  
 420 425 430  
 Gly Lys Phe Lys Glu Pro Gln Ala Val Phe Tyr Ala Ala Glu Ile Ser  
 435 440 445  
 Ile Gly Leu Phe Phe Leu His Lys Arg Gly Ile Ile Tyr Arg Asp Leu  
 450 455 460  
 Lys Leu Asn Asn Val Met Leu Asn Ser Glu Gly His Ile Lys Ile Ala  
 465 470 475 480  
 Asp Phe Gly Met Cys Lys Glu His Met Met Asp Gly Val Thr Thr Arg  
 485 490 495  
 Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr  
 500 505 510  
 Gln Pro Tyr Gly Lys Ser Val Asp Trp Trp Ala Tyr Gly Val Leu Leu  
 515 520 525  
 Tyr Glu Met Leu Ala Gly Gln Pro Pro Phe Asp Gly Glu Asp Glu Asp  
 530 535 540  
 Glu Leu Phe Gln Ser Ile Met Glu His Asn Val Ser Tyr Pro Lys Ser  
 545 550 555 560  
 Leu Ser Lys Glu Ala Val Ser Ile Cys Lys Gly Leu Met Thr Lys Gln  
 565 570 575  
 Pro Ala Lys Arg Leu Gly Cys Gly Pro Glu Gly Glu Arg Asp Val Arg  
 580 585 590  
 Glu His Ala Phe Phe Arg Arg Ile Asp Trp Glu Lys Leu Glu Asn Arg  
 595 600 605  
 Glu Ile Gln Pro Pro Phe Lys Pro Lys Val Cys Gly Lys Gly Ala Glu  
 610 615 620  
 Asn Phe Asp Lys Phe Phe Thr Arg Gly Gln Pro Val Leu Thr Pro Pro  
 625 630 635 640  
 Asp Gln Leu Val Ile Ala Asn Ile Asp Gln Ser Asp Phe Glu Gly Phe  
 645 650 655  
 Ser Tyr Val Asn Pro Gln Phe Val His Pro Ile Leu Gln Ser Ala Val  
 660 665 670  
 Gly Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro  
 675 680 685  
 Ile Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val  
 690 695 700  
 Ser Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys  
 705 710 715 720

16

Phe Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val  
                             725                            730                            735  
 Thr Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His  
                             740                            745                            750  
 Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val  
                             755                            760                            765  
 Gln Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg  
                             770                            775                            780  
 Ala Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu  
 785                            790                            795                            800  
 Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met  
                             805                            810                            815  
 Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro  
                             820                            825                            830  
 Lys Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp  
                             835                            840                            845  
 Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly  
                             850                            855                            860  
 Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser  
 865                            870                            875                            880  
 Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu  
                             885                            890                            895  
 Glu Phe Val Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr  
                             900                            905                            910  
 Lys Pro Gln Glu  
                             915

&lt;210&gt; 5

&lt;211&gt; 1896

&lt;212&gt; DNA

&lt;213&gt; Aequorea victoria and human

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)...(1896)

&lt;400&gt; 5

atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg  
 Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu  
 1                            5                            10                            15

48



gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc 96  
 Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly  
 20 25 30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc 144  
 Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile  
 35 40 45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc 192  
 Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr  
 50 55 60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag 240  
 Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys  
 65 70 75 80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag 288  
 Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu  
 85 90 95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag 336  
 Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu  
 100 105 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc 384  
 Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly  
 115 120 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac 432  
 Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr  
 130 135 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac 480  
 Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn  
 145 150 155 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc 528  
 Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser  
 165 170 175

gtg	cag	ctc	gcc	gac	cac	tac	cag	cag	aac	acc	ccc	atc	ggc	gac	ggc	576
Val	Gln	Leu	Ala	Asp	His	Tyr	Gln	Gln	Asn	Thr	Pro	Ile	Gly	Asp	Gly	
			180					185					190			
ccc	gtg	ctg	ctg	ccc	gac	aac	cac	tac	ctg	agc	acc	cag	tcc	gcc	ctg	624
Pro	Val	Leu	Leu	Pro	Asp	Asn	His	Tyr	Leu	Ser	Thr	Gln	Ser	Ala	Leu	
			195				200					205				
agc	aaa	gac	ccc	aac	gag	aag	cgc	gat	cac	atg	gtc	ctg	ctg	gag	ttc	672
Ser	Lys	Asp	Pro	Asn	Glu	Lys	Arg	Asp	His	Met	Val	Leu	Leu	Glu	Phe	
	210					215				220						
gtg	acc	gcc	gcc	ggg	atc	act	ctc	ggc	atg	gac	gag	ctg	tac	aag	tcc	720
Val	Thr	Ala	Ala	Gly	Ile	Thr	Leu	Gly	Met	Asp	Glu	Leu	Tyr	Lys	Ser	
225					230				235					240		
gga	ctc	aga	tct	cga	gct	caa	gct	tcg	aat	tca	acc	atg	gcg	gcg	gcg	768
Gly	Leu	Arg	Ser	Arg	Ala	Gln	Ala	Ser	Asn	Ser	Thr	Met	Ala	Ala	Ala	
			245					250					255			
gcg	gct	cag	ggg	ggc	ggg	ggc	ggg	gag	ccc	cgt	aga	acc	gag	ggg	gtc	816
Ala	Ala	Gln	Gly	Gly	Gly	Gly	Gly	Glu	Pro	Arg	Arg	Thr	Glu	Gly	Val	
		260				265						270				
ggc	ccg	ggg	gtc	ccg	ggg	gag	gtg	gag	atg	gtg	aag	ggg	cag	ccg	ttc	864
Gly	Pro	Gly	Val	Pro	Gly	Glu	Val	Glu	Met	Val	Lys	Gly	Gln	Pro	Phe	
	275					280					285					
gac	gtg	ggc	ccg	cgc	tac	acg	cag	ttg	cag	tac	atc	ggc	gag	ggc	gcg	912
Asp	Val	Gly	Pro	Arg	Tyr	Thr	Gln	Leu	Gln	Tyr	Ile	Gly	Glu	Gly	Ala	
	290					295				300						
tac	ggc	atg	gtc	agc	tcg	gcc	tat	gac	cac	gtg	cgc	aag	act	cgc	gtg	960
Tyr	Gly	Met	Val	Ser	Ser	Ala	Tyr	Asp	His	Val	Arg	Lys	Thr	Arg	Val	
305				310				315					320			
gcc	atc	aag	aag	atc	agc	ccc	ttc	gaa	cat	cag	acc	tac	tgc	cag	cgc	1008
Ala	Ile	Lys	Lys	Ile	Ser	Pro	Phe	Glu	His	Gln	Thr	Tyr	Cys	Gln	Arg	
				325				330				335				

acg ctc cgg gag atc cag atc ctg ctg cgc ttc cgc cat gag aat gtc 1056  
Thr Leu Arg Glu Ile Gln Ile Leu Leu Arg Phe Arg His Glu Asn Val  
340 345 350

atc ggc atc cga gac att ctg cgg gcg tcc acc ctg gaa gcc atg aga 1104  
Ile Gly Ile Arg Asp Ile Leu Arg Ala Ser Thr Leu Glu Ala Met Arg  
355 360 365

gat gtc tac att gtg cag gac ctg atg gag act gac ctg tac aag ttg 1152  
Asp Val Tyr Ile Val Gln Asp Leu Met Glu Thr Asp Leu Tyr Lys Leu  
370 375 380

ctg aaa agc cag cag ctg agc aat gac cat atc tgc tac ttc ctc tac 1200  
Leu Lys Ser Gln Gln Leu Ser Asn Asp His Ile Cys Tyr Phe Leu Tyr  
385 390 395 400

cag atc ctg cgg ggc ctc aag tac atc cac tcc gcc aac gtg ctc cac 1248  
Gln Ile Leu Arg Gly Leu Lys Tyr Ile His Ser Ala Asn Val Leu His  
405 410 415

cga gat cta aag ccc tcc aac ctg ctc agc aac acc acc tgc gac ctt 1296  
Arg Asp Leu Lys Pro Ser Asn Leu Leu Ser Asn Thr Thr Cys Asp Leu  
420 425 430

aag att tgt gat ttc ggc ctg gcc cgg att gcc gat cct gag cat gac 1344  
Lys Ile Cys Asp Phe Gly Leu Ala Arg Ile Ala Asp Pro Glu His Asp  
435 440 445

cac acc ggc ttc ctg acg gag tat gtg gct acg cgc tgg tac cgg gcc 1392  
His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala  
450 455 460

cca gag atc atg ctg aac tcc aag ggc tat acc aag tcc atc gac atc 1440  
Pro Glu Ile Met Leu Asn Ser Lys Gly Tyr Thr Lys Ser Ile Asp Ile  
465 470 475 480

tgg tct gtg ggc tgc att ctg gct gag atg ctc tct aac cgg ccc atc 1488  
Trp Ser Val Gly Cys Ile Leu Ala Glu Met Leu Ser Asn Arg Pro Ile  
485 490 495

ttc cct ggc aag cac tac ctg gat cag ctc aac cac att ctg ggc atc 1536  
 Phe Pro Gly Lys His Tyr Leu Asp Gln Leu Asn His Ile Leu Gly Ile  
 500 505 510

ctg ggc tcc cca tcc cag gag gac ctg aat tgt atc atc aac atg aag 1584  
 Leu Gly Ser Pro Ser Gln Glu Asp Leu Asn Cys Ile Ile Asn Met Lys  
 515 520 525

gcc cga aac tac cta cag tct ctg ccc tcc aag acc aag gtg gct tgg 1632  
 Ala Arg Asn Tyr Leu Gln Ser Leu Pro Ser Lys Thr Lys Val Ala Trp  
 530 535 540

gcc aag ctt ttc ccc aag tca gac tcc aaa gcc ctt gac ctg ctg gac 1680  
 Ala Lys Leu Phe Pro Lys Ser Asp Ser Lys Ala Leu Asp Leu Leu Asp  
 545 550 555 560

cgg atg tta acc ttt aac ccc aat aaa cgg atc aca gtg gag gaa gcg 1728  
 Arg Met Leu Thr Phe Asn Pro Asn Lys Arg Ile Thr Val Glu Glu Ala  
 565 570 575

ctg gct cac ccc tac ctg gag cag tac tat gac ccg acg gat gag cca 1776  
 Leu Ala His Pro Tyr Leu Glu Gln Tyr Tyr Asp Pro Thr Asp Glu Pro  
 580 585 590

gtg gcc gag gag ccc ttc acc ttc gcc atg gag ctg gat gac cta cct 1824  
 Val Ala Glu Glu Pro Phe Thr Phe Ala Met Glu Leu Asp Asp Leu Pro  
 595 600 605

aag gag cgg ctg aag gag ctc atc ttc cag gag aca gca cgc ttc cag 1872  
 Lys Glu Arg Leu Lys Glu Leu Ile Phe Gln Glu Thr Ala Arg Phe Gln  
 610 615 620

ccc gga gtg ctg gag gcc ccc tag 1896  
 Pro Gly Val Leu Glu Ala Pro \*  
 625 630

&lt;210&gt; 6

&lt;211&gt; 631

<212> PRT

<213> Aequorea victoria and human

<400> 6

Met	Val	Ser	Lys	Gly	Glu	Glu	Leu	Phe	Thr	Gly	Val	Val	Pro	Ile	Leu
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Val	Glu	Leu	Asp	Gly	Asp	Val	Asn	Gly	His	Lys	Phe	Ser	Val	Ser	Gly
			20					25					30		
Glu	Gly	Glu	Gly	Asp	Ala	Thr	Tyr	Gly	Lys	Leu	Thr	Leu	Lys	Phe	Ile
			35				40					45			
Cys	Thr	Thr	Gly	Lys	Leu	Pro	Val	Pro	Trp	Pro	Thr	Leu	Val	Thr	Thr
	50					55					60				
Leu	Thr	Tyr	Gly	Val	Gln	Cys	Phe	Ser	Arg	Tyr	Pro	Asp	His	Met	Lys
65					70				75						80
Gln	His	Asp	Phe	Phe	Lys	Ser	Ala	Met	Pro	Glu	Gly	Tyr	Val	Gln	Glu
				85					90					95	
Arg	Thr	Ile	Phe	Phe	Lys	Asp	Asp	Gly	Asn	Tyr	Lys	Thr	Arg	Ala	Glu
			100					105					110		
Val	Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	Glu	Leu	Lys	Gly
		115					120					125			
Ile	Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	Gly	His	Lys	Leu	Glu	Tyr
	130					135					140				
Asn	Tyr	Asn	Ser	His	Asn	Val	Tyr	Ile	Met	Ala	Asp	Lys	Gln	Lys	Asn
145					150					155					160
Gly	Ile	Lys	Val	Asn	Phe	Lys	Ile	Arg	His	Asn	Ile	Glu	Asp	Gly	Ser
				165				170						175	
Val	Gln	Leu	Ala	Asp	His	Tyr	Gln	Gln	Asn	Thr	Pro	Ile	Gly	Asp	Gly
			180					185					190		
Pro	Val	Leu	Leu	Pro	Asp	Asn	His	Tyr	Leu	Ser	Thr	Gln	Ser	Ala	Leu
		195					200					205			
Ser	Lys	Asp	Pro	Asn	Glu	Lys	Arg	Asp	His	Met	Val	Leu	Leu	Glu	Phe
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Val	Thr	Ala	Ala	Gly	Ile	Thr	Leu	Gly	Met	Asp	Glu	Leu	Tyr	Lys	Ser
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Gly	Leu	Arg	Ser	Arg	Ala	Gln	Ala	Ser	Asn	Ser	Thr	Met	Ala	Ala	Ala
				245					250					255	
Ala	Ala	Gln	Gly	Gly	Gly	Gly	Gly	Glu	Pro	Arg	Arg	Thr	Glu	Gly	Val
			260					265					270		
Gly	Pro	Gly	Val	Pro	Gly	Glu	Val	Glu	Met	Val	Lys	Gly	Gln	Pro	Phe
	275						280						285		

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 Tyr Gly Met Val Ser Ser Ala Tyr Asp His Val Arg Lys Thr Arg Val  
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 Thr Leu Arg Glu Ile Gln Ile Leu Leu Arg Phe Arg His Glu Asn Val  
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 355 360 365  
 Asp Val Tyr Ile Val Gln Asp Leu Met Glu Thr Asp Leu Tyr Lys Leu  
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 385 390 395 400  
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 Arg Asp Leu Lys Pro Ser Asn Leu Leu Ser Asn Thr Thr Cys Asp Leu  
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 Lys Ile Cys Asp Phe Gly Leu Ala Arg Ile Ala Asp Pro Glu His Asp  
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 His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala  
 450 455 460  
 Pro Glu Ile Met Leu Asn Ser Lys Gly Tyr Thr Lys Ser Ile Asp Ile  
 465 470 475 480  
 Trp Ser Val Gly Cys Ile Leu Ala Glu Met Leu Ser Asn Arg Pro Ile  
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 Phe Pro Gly Lys His Tyr Leu Asp Gln Leu Asn His Ile Leu Gly Ile  
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 Leu Gly Ser Pro Ser Gln Glu Asp Leu Asn Cys Ile Ile Asn Met Lys  
 515 520 525  
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 Ala Lys Leu Phe Pro Lys Ser Asp Ser Lys Ala Leu Asp Leu Leu Asp  
 545 550 555 560  
 Arg Met Leu Thr Phe Asn Pro Asn Lys Arg Ile Thr Val Glu Glu Ala  
 565 570 575  
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<213> Aequorea victoria and human

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Met	Val	Ser	Lys	Gly	Glu	Glu	Leu	Phe	Thr	Gly	Val	Val	Pro	Ile	Leu	
1				5				10					15			
gtc	gag	ctg	gac	ggc	gac	gta	aac	ggc	cac	aag	ttc	agc	gtg	tcc	ggc	96
Val	Glu	Leu	Asp	Gly	Asp	Val	Asn	Gly	His	Lys	Phe	Ser	Val	Ser	Gly	
			20					25					30			
gag	ggc	gag	ggc	gat	gcc	acc	tac	ggc	aag	ctg	acc	ctg	aag	ttc	atc	144
Glu	Gly	Glu	Gly	Asp	Ala	Thr	Tyr	Gly	Lys	Leu	Thr	Leu	Lys	Phe	Ile	
			35					40					45			
tgc	acc	acc	ggc	aag	ctg	ccc	gtg	ccc	tgg	ccc	acc	ctc	gtg	acc	acc	192
Cys	Thr	Thr	Gly	Lys	Leu	Pro	Val	Pro	Trp	Pro	Thr	Leu	Val	Thr	Thr	
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ctg	acc	tac	ggc	gtg	cag	tgc	ttc	agc	cgc	tac	ccc	gac	cac	atg	aag	240
Leu	Thr	Tyr	Gly	Val	Gln	Cys	Phe	Ser	Arg	Tyr	Pro	Asp	His	Met	Lys	
		65				70				75				80		
cag	cac	gac	ttc	ttc	aag	tcc	gcc	atg	ccc	gaa	ggc	tac	gtc	cag	gag	288
Gln	His	Asp	Phe	Phe	Lys	Ser	Ala	Met	Pro	Glu	Gly	Tyr	Val	Gln	Glu	
				85					90					95		
cgc	acc	atc	ttc	ttc	aag	gac	gac	ggc	aac	tac	aag	acc	cgc	gcc	gag	336

Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu	
100 105 110	
gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc	384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly	
115 120 125	
atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac	432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr	
130 135 140	
aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac	480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn	
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ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc	528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser	
165 170 175	
gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc	576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly	
180 185 190	
ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg	624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu	
195 200 205	
agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc	672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe	
210 215 220	
gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc	720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser	
225 230 235 240	
gga ctc aga tct cga gct caa gct tcg aat tcg acc atg tcg tcc atc	768
Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ser Ser Ile	
245 250 255	
ttg cca ttc acg ccg cca gtt gtg aag aga ctg ctg gga tgg aag aag	816



Leu	Pro	Phe	Thr	Pro	Pro	Val	Val	Lys	Arg	Leu	Leu	Gly	Trp	Lys	Lys		
				260				265					270				
tca	gct	ggt	ggg	tct	gga	gga	gca	ggc	gga	gga	gag	cag	aat	ggg	cag	864	
Ser	Ala	Gly	Gly	Ser	Gly	Gly	Ala	Gly	Gly	Gly	Glu	Gln	Asn	Gly	Gln		
		275					280				285						
gaa	gaa	aag	tgg	tgt	gag	aaa	gca	gtg	aaa	agt	ctg	gtg	aag	aag	cta	912	
Glu	Glu	Lys	Trp	Cys	Glu	Lys	Ala	Val	Lys	Ser	Leu	Val	Lys	Lys	Leu		
		290				295					300						
aag	aaa	aca	gga	cga	tta	gat	gag	ctt	gag	aaa	gcc	atc	acc	act	caa	960	
Lys	Lys	Thr	Gly	Arg	Leu	Asp	Glu	Leu	Glu	Lys	Ala	Ile	Thr	Thr	Gln		
305					310				315					320			
aac	tgt	aat	act	aaa	tgt	gtt	acc	ata	cca	agc	act	tgc	tct	gaa	att	1008	
Asn	Cys	Asn	Thr	Lys	Cys	Val	Thr	Ile	Pro	Ser	Thr	Cys	Ser	Glu	Ile		
				325				330						335			
tgg	gga	ctg	agt	aca	cca	aat	acg	ata	gat	cag	tgg	gat	aca	aca	ggc	1056	
Trp	Gly	Leu	Ser	Thr	Pro	Asn	Thr	Ile	Asp	Gln	Trp	Asp	Thr	Thr	Gly		
		340					345						350				
ctt	tac	agc	ttc	tct	gaa	caa	acc	agg	tct	ctt	gat	ggt	cgt	ctc	cag	1104	
Leu	Tyr	Ser	Phe	Ser	Glu	Gln	Thr	Arg	Ser	Leu	Asp	Gly	Arg	Leu	Gln		
		355					360						365				
gta	tcc	cat	cga	aaa	gga	ttg	cca	cat	gtt	ata	tat	tgc	cga	tta	tgg	1152	
Val	Ser	His	Arg	Lys	Gly	Leu	Pro	His	Val	Ile	Tyr	Cys	Arg	Leu	Trp		
		370				375				380							
cgc	tgg	cct	gat	ctt	cac	agt	cat	cat	gaa	ctc	aag	gca	att	gaa	aac	1200	
Arg	Trp	Pro	Asp	Leu	His	Ser	His	His	Glu	Leu	Lys	Ala	Ile	Glu	Asn		
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tgc	gaa	tat	gct	ttt	aat	ctt	aaa	aag	gat	gaa	gta	tgt	gta	aac	cct	1248	
Cys	Glu	Tyr	Ala	Phe	Asn	Leu	Lys	Lys	Asp	Glu	Val	Cys	Val	Asn	Pro		
				405					410					415			
tac	cac	tat	cag	aga	gtt	gag	aca	cca	gtt	ttg	cct	cca	gta	tta	gtg	1296	

Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro Pro Val Leu Val	
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ccc cga cac acc gag atc cta aca gaa ctt ccg cct ctg gat gac tat	1344
Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro Leu Asp Asp Tyr	
435 440 445	
act cac tcc att cca gaa aac act aac ttc cca gca gga att gag cca	1392
Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala Gly Ile Glu Pro	
450 455 460	
cag agt aat tat att cca gaa acg cca cct cct gga tat atc agt gaa	1440
Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly Tyr Ile Ser Glu	
465 470 475 480	
gat gga gaa aca agt gac caa cag ttg aat caa agt atg gac aca ggc	1488
Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser Met Asp Thr Gly	
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Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro Val Asn His Ser	
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Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala Phe Trp Cys Ser	
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Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu Thr Phe His Ala	
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Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp Pro Ser Asn Ser	
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Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn Arg Asn Ala Thr	
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Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val Arg Leu Tyr Tyr	
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590	
ata ggt ggg gaa gtt ttt gct gag tgc cta agt gat agt gca atc ttt	1824
Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp Ser Ala Ile Phe	
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605	
gtg cag agc ccc aat tgt aat cag aga tat ggc tgg cac cct gca aca	1872
Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp His Pro Ala Thr	
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620	
gtg tgt aaa att cca cca ggc tgt aat ctg aag atc ttc aac aac cag	1920
Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile Phe Asn Asn Gln	
625	630
635	640
gaa ttt gct gct ctt ctg gct cag tct gtt aat cag ggt ttt gaa gcc	1968
Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln Gly Phe Glu Ala	
645	650
655	
gtc tat cag cta act aga atg tgc acc ata aga atg agt ttt gtg aaa	2016
Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met Ser Phe Val Lys	
660	665
670	
ggg tgg gga gca gaa tac cga agg cag acg gta aca agt act cct tgc	2064
Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr Ser Thr Pro Cys	
675	680
685	
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Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp Leu Asp Lys Val	
690	695
700	
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Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser Ser Met Ser *	
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<212> PRT

<213> Aequorea victoria and human

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 Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr  
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 Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu  
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 Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly  
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 Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr  
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 Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn  
 145 150 155 160  
 Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser  
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 Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly  
 180 185 190  
 Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu  
 195 200 205  
 Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe  
 210 215 220  
 Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser  
 225 230 235 240  
 Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ser Ser Ile  
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 Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu Gln Asn Gly Gln  
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 Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu Val Lys Lys Leu  
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Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala Ile Thr Thr Gln  
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 405 410 415  
 Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro Pro Val Leu Val  
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 Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro Leu Asp Asp Tyr  
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 Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala Gly Ile Glu Pro  
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 Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly Tyr Ile Ser Glu  
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 Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro Val Asn His Ser  
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 Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp Pro Ser Asn Ser  
 545 550 555 560  
 Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn Arg Asn Ala Thr  
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 Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val Arg Leu Tyr Tyr  
 580 585 590  
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 595 600 605  
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Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile Phe Asn Asn Gln  
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 Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln Gly Phe Glu Ala  
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 Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr Ser Thr Pro Cys  
 675 680 685  
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 <212> DNA  
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 Gly Trp Lys Lys Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu  
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 cag aat ggg cag gaa gaa aag tgg tgt gag aaa gca gtg aaa agt ctg 144  
 Gln Asn Gly Gln Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu  
 35 40 45  
 gtg aag aag cta aag aaa aca gga cga tta gat gag ctt gag aaa gcc 192  
 Val Lys Lys Leu Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala  
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Ile Thr Thr Gln Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr  
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 Cys Ser Glu Ile Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp  
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 gat aca aca ggc ctt tac agc ttc tct gaa caa acc agg tct ctt gat 336  
 Asp Thr Thr Gly Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp  
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 Gly Arg Leu Gln Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr  
 115 120 125  
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 Cys Arg Leu Trp Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys  
 130 135 140  
 gca att gaa aac tgc gaa tat gct ttt aat ctt aaa aag gat gaa gta 480  
 Ala Ile Glu Asn Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val  
 145 150 155 160  
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 Cys Val Asn Pro Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro  
 165 170 175  
 cca gta tta gtg ccc cga cac acc gag atc cta aca gaa ctt ccg cct 576  
 Pro Val Leu Val Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro  
 180 185 190  
 ctg gat gac tat act cac tcc att cca gaa aac act aac ttc cca gca 624  
 Leu Asp Asp Tyr Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala  
 195 200 205  
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 Gly Ile Glu Pro Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly  
 210 215 220  
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Tyr Ile Ser Glu Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser  
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 Met Asp Thr Gly Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro  
 245 250 255  
 gtt aat cat agc ttg gat tta cag cca gtt act tac tca gaa cct gca 816  
 Val Asn His Ser Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala  
 260 265 270  
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 Thr Phe His Ala Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp  
 290 295 300  
 cca tca aat tca gag agg ttc tgc tta ggt tta ctc tcc aat gtt aac 960  
 Pro Ser Asn Ser Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn  
 305 310 315 320  
 cga aat gcc acg gta gaa atg aca aga agg cat ata gga aga gga gtg 1008  
 Arg Asn Ala Thr Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val  
 325 330 335  
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 Ser Ala Ile Phe Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp  
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 cac cct gca aca gtg tgt aaa att cca cca ggc tgt aat ctg aag atc 1152  
 His Pro Ala Thr Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile  
 370 375 380  
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 Gly Phe Glu Ala Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met  
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 agt ttt gtg aaa ggg tgg gga gca gaa tac cga agg cag acg gta aca 1296  
 Ser Phe Val Lys Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr  
 420 425 430  
 agt act cct tgc tgg att gaa ctt cat ctg aat gga cct cta cag tgg 1344  
 Ser Thr Pro Cys Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp  
 435 440 445  
 ttg gac aaa gta tta act cag atg gga tcc cct tca gtg cgt tgc tca 1392  
 Leu Asp Lys Val Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser  
 450 455 460  
 agc atg tca tgg gta ccg cgg gcc cgg gat cca ccg gtc gcc acc atg 1440  
 Ser Met Ser Trp Val Pro Arg Ala Arg Asp Pro Pro Val Ala Thr Met  
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 gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg gtc 1488  
 Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val  
 485 490 495  
 gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc gag 1536  
 Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu  
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 Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys  
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 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu  
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 acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag cag 1680

Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln  
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 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg  
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 acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag gtg 1776  
 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val  
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 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile  
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 gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac aac 1872  
 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn  
 610 615 620  
 tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac ggc 1920  
 Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly  
 625 630 635 640  
 atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc gtg 1968  
 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val  
 645 650 655  
 cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc ccc 2016  
 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro  
 660 665 670  
 gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg agc 2064  
 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser  
 675 680 685  
 aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc gtg 2112  
 Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val  
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 acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag taa 2157

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<210> 10
<211> 718
<212> PRT
<213> Aequorea victoria and human
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Met Ser Ser Ile Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu  
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Gly Trp Lys Lys Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu  
20 25 30  
Gln Asn Gly Gln Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu  
35 40 45  
Val Lys Lys Leu Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala  
50 55 60  
Ile Thr Thr Gln Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr  
65 70 75 80  
Cys Ser Glu Ile Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp  
85 90 95  
Asp Thr Thr Gly Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp  
100 105 110  
Gly Arg Leu Gln Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr  
115 120 125  
Cys Arg Leu Trp Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys  
130 135 140  
Ala Ile Glu Asn Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val  
145 150 155 160  
Cys Val Asn Pro Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro  
165 170 175  
Pro Val Leu Val Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro  
180 185 190  
Leu Asp Asp Tyr Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala  
195 200 205  
Gly Ile Glu Pro Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly  
210 215 220  
Tyr Ile Ser Glu Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser  
225 230 235 240

Met Asp Thr Gly Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro  
245 250 255

Val Asn His Ser Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala  
260 265 270

Phe Trp Cys Ser Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu  
275 280 285

Thr Phe His Ala Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp  
290 295 300

Pro Ser Asn Ser Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn  
305 310 315 320

Arg Asn Ala Thr Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val  
325 330 335

Arg Leu Tyr Tyr Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp  
340 345 350

Ser Ala Ile Phe Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp  
355 360 365

His Pro Ala Thr Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile  
370 375 380

Phe Asn Asn Gln Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln  
385 390 395 400

Gly Phe Glu Ala Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met  
405 410 415

Ser Phe Val Lys Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr  
420 425 430

Ser Thr Pro Cys Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp  
435 440 445

Leu Asp Lys Val Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser  
450 455 460

Ser Met Ser Trp Val Pro Arg Ala Arg Asp Pro Pro Val Ala Thr Met  
465 470 475 480

Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val  
485 490 495

Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu  
500 505 510

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys  
515 520 525

Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu  
530 535 540

Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln  
545 550 555 560

His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg  
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Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val  
580 585 590  
Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile  
595 600 605  
Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn  
610 615 620  
Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly  
625 630 635 640  
Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val  
645 650 655  
Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro  
660 665 670  
Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser  
675 680 685  
Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val  
690 695 700  
Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys  
705 710 715

&lt;210&gt; 11

&lt;211&gt; 1908

&lt;212&gt; DNA

&lt;213&gt; Aequorea victoria and human

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)...(1908)

&lt;400&gt; 11

atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg  
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu  
1 5 10 15

48

gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc  
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly  
20 25 30

96

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc

144

Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile  
 35 40 45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc 192  
 Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr  
 50 55 60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag 240  
 Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys  
 65 70 75 80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag 288  
 Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu  
 85 90 95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag 336  
 Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu  
 100 105 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc 384  
 Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly  
 115 120 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac 432  
 Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr  
 130 135 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac 480  
 Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn  
 145 150 155 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc 528  
 Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser  
 165 170 175

gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc 576  
 Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly  
 180 185 190

ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg 624

agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc 672  
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe  
210 215 220

gtg	acc	gcc	gcc	ggg	atc	act	ctc	ggc	atg	gac	gag	ctg	tac	aag	tcc	720
Val	Thr	Ala	Ala	Gly	Ile	Thr	Leu	Gly	Met	Asp	Glu	Leu	Tyr	Lys	Ser	
225					230					235					240	

gga ctc aga tct cga gct caa gct tcc atg agc gag acg gtc atc atg 768  
Gly Leu Arg Ser Arg Ala Gln Ala Ser Met Ser Glu Thr Val Ile Met  
245 250 255

agc gag acg gtc atc tgt tcc agc cgg gcc act gtg atg ctt tat gat 816  
Ser Glu Thr Val Ile Cys Ser Ser Arg Ala Thr Val Met Leu Tyr Asp  
260 265 270

gat ggc aac aag cga tgg ctc cct gct ggc acg ggt ccc cag gcc ttc 864  
Asp Gly Asn Lys Arg Trp Leu Pro Ala Gly Thr Gly Pro Gln Ala Phe  
275 280 285

agc cgc gtc cag atc tac cac aac ccc acg gcc aat tcc ttt cgc gtc 912  
Ser Arg Val Gln Ile Tyr His Asn Pro Thr Ala Asn Ser Phe Arg Val  
290 295 300

gtg ggc cgg aag atg cag ccc gac cag cag gtg gtc atc aac tgt gcc 960  
Val Gly Arg Lys Met Gln Pro Asp Gln Gln Val Val Ile Asn Cys Ala  
305 310 315 320

atc gtc cgg ggt gtc aag tat aac cag gcc acc ccc aac ttc cat cag 1008  
Ile Val Arg Gly Val Lys Tyr Asn Gln Ala Thr Pro Asn Phe His Gln  
325 330 335

tgg cgc gac gct cgc cag gtc tgg ggc ctc aac ttc ggc agc aag gag 1056  
Trp Arg Asp Ala Arg Gln Val Trp Gly Leu Asn Phe Gly Ser Lys Glu  
340 345 350

gat gcg gcc cag ttt gcc gcc ggc atg gcc agt gcc cta gag gcg ttg 1104

Asp Ala Ala Gln Phe Ala Ala Gly Met Ala Ser Ala Leu Glu Ala Leu  
355 360 365

gaa gga ggt ggg ccc cct cca ccc cca gca ctt ccc acc tgg tcg gtc 1152  
Glu Gly Gly Gly Pro Pro Pro Pro Pro Ala Leu Pro Thr Trp Ser Val  
370 375 380

ccg aac ggc ccc tcc ccg gag gag gtg gag cag cag aaa agg cag cag 1200  
Pro Asn Gly Pro Ser Pro Glu Glu Val Glu Gln Gln Lys Arg Gln Gln  
385 390 395 400

ccc ggc ccg tcg gag cac ata gag cgc cgg gtc tcc aat gca gga ggc 1248  
Pro Gly Pro Ser Glu His Ile Glu Arg Arg Val Ser Asn Ala Gly Gly  
405 410 415

cca cct gct ccc ccc gct ggg ggt cca ccc cca cca cca gga cct ccc 1296  
Pro Pro Ala Pro Pro Ala Gly Gly Pro Pro Pro Pro Pro Gly Pro Pro  
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cct cct cca ggt ccc ccc cca ccc cca ggt ttg ccc cct tcg ggg gtc 1344  
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cca gct gca gcg cac gga gca ggg gga gga cca ccc cct gca ccc cct 1392  
Pro Ala Ala Ala His Gly Ala Gly Gly Gly Pro Pro Pro Ala Pro Pro  
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ctc ccg gca gca cag ggc cct ggt ggt ggg gga gct ggg gcc cca ggc 1440  
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465 470 475 480

ctg gcc gca gct att gct gga gcc aaa ctc agg aaa gtc agc aag cag 1488  
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485 490 495

gag gag gcc tca ggg ggg ccc aca gcc ccc aaa gct gag agt ggt cga 1536  
Glu Glu Ala Ser Gly Gly Pro Thr Ala Pro Lys Ala Glu Ser Gly Arg  
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agc gga ggt ggg gga ctc atg gaa gag atg aac gcc atg ctg gcc cgg 1584



Ser Gly Gly Gly Gly Leu Met Glu Glu Met Asn Ala Met Leu Ala Arg  
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 aga agg aaa gcc acg caa gtt ggg gag aaa acc ccc aag gat gaa tct 1632  
 Arg Arg Lys Ala Thr Gln Val Gly Glu Lys Thr Pro Lys Asp Glu Ser  
 530 535 540  
 gcc aat cag gag gag cca gag gcc aga gtc ccg gcc cag agt gaa tct 1680  
 Ala Asn Gln Glu Glu Pro Glu Ala Arg Val Pro Ala Gln Ser Glu Ser  
 545 550 555 560  
 gtg cgg aga ccc tgg gag aag aac agc aca acc ttg cca agg atg aag 1728  
 Val Arg Arg Pro Trp Glu Lys Asn Ser Thr Thr Leu Pro Arg Met Lys  
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 tcg tct tct tcg gtg acc act tcc gag acc caa ccc tgc acg ccc agc 1776  
 Ser Ser Ser Ser Val Thr Thr Ser Glu Thr Gln Pro Cys Thr Pro Ser  
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 tcc agt gat tac tcg gac cta cag agg gtg aaa cag gag ctt ctg gaa 1824  
 Ser Ser Asp Tyr Ser Asp Leu Gln Arg Val Lys Gln Glu Leu Leu Glu  
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 Glu Val Lys Lys Glu Leu Gln Lys Val Lys Glu Glu Ile Ile Glu Ala  
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 ttc gtc cag gag ctg agg aag cgg ggt tct ccc tga 1908  
 Phe Val Gln Glu Leu Arg Lys Arg Gly Ser Pro \*  
 625 630 635

&lt;210&gt; 12

&lt;211&gt; 635

&lt;212&gt; PRT

&lt;213&gt; Aequorea victoria and human

&lt;400&gt; 12

Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu

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Val	Glu	Leu	Asp	Gly	Asp	Val	Asn	Gly	His	Lys	Phe	Ser	Val	Ser	Gly	
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Glu	Gly	Glu	Gly	Asp	Ala	Thr	Tyr	Gly	Lys	Leu	Thr	Leu	Lys	Phe	Ile	
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Cys	Thr	Thr	Gly	Lys	Leu	Pro	Val	Pro	Trp	Pro	Thr	Leu	Val	Thr	Thr	
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Gln	His	Asp	Phe	Phe	Lys	Ser	Ala	Met	Pro	Glu	Gly	Tyr	Val	Gln	Glu	
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Arg	Thr	Ile	Phe	Phe	Lys	Asp	Asp	Gly	Asn	Tyr	Lys	Thr	Arg	Ala	Glu	
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gtg	aag	ttc	gag	ggc	gac	acc	ctg	gtg	aac	cgc	atc	gag	ctg	aag	ggc	384
Val	Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	Glu	Leu	Lys	Gly	
			115				120					125				

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac 432  
 Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr  
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aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac 480  
 Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn  
 145 150 155 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc 528  
 Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser  
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gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc 576  
 Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly  
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ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg 624  
 Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu  
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agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc 672  
 Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe  
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gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc 720  
 Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser  
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gga ctc aga tct cga gcc atg gac gaa ctg ttc ccc ctc atc ttc ccg 768  
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gca gag cca gcc cag gcc tct ggc ccc tat gtg gag atc att gag cag 816  
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 Pro Lys Gln Arg Gly Met Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser  
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ccc acc atc aag atc aat ggc tac aca gga cca ggg aca gtg cgc atc 960  
Pro Thr Ile Lys Ile Asn Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile  
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tcc ctg gtc acc aag gac cct cct cac cgg cct cac ccc cac gag ctt 1008  
Ser Leu Val Thr Lys Asp Pro Pro His Arg Pro His Pro His Glu Leu  
325 330 335

gta gga aag gac tgc cgg gat ggc ttc tat gag gct gag ctc tgc ccg 1056  
Val Gly Lys Asp Cys Arg Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro  
340 345 350

gac cgc tgc atc cac agt ttc cag aac ctg gga atc cag tgt gtg aag 1104  
Asp Arg Cys Ile His Ser Phe Gln Asn Leu Gly Ile Gln Cys Val Lys  
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aag cgg gac ctg gag cag gct atc agt cag cgc atc cag acc aac aac 1152  
Lys Arg Asp Leu Glu Gln Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn  
370 375 380

aac ccc ttc caa gtt cct ata gaa gag cag cgt ggg gac tac gac ctg 1200  
Asn Pro Phe Gln Val Pro Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu  
385 390 395 400

aat gct gtg cgg ctc tgc ttc cag gtg aca gtg cgg gac cca tca ggc 1248  
Asn Ala Val Arg Leu Cys Phe Gln Val Thr Val Arg Asp Pro Ser Gly  
405 410 415

agg ccc ctc cgc ctg ccg cct gtc ctt cct cat ccc atc ttt gac aat 1296  
Arg Pro Leu Arg Leu Pro Pro Val Leu Pro His Pro Ile Phe Asp Asn  
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cgt gcc ccc aac act gcc gag ctc aag atc tgc cga gtg aac cga aac 1344  
Arg Ala Pro Asn Thr Ala Glu Leu Lys Ile Cys Arg Val Asn Arg Asn  
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tct ggc agc tgc ctc ggt ggg gat gag atc ttc cta ctg tgt gac aag 1392  
Ser Gly Ser Cys Leu Gly Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys  
450 455 460

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Val Gln Lys Glu Asp Ile Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu  
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gcc cga ggc tcc ttt tcg caa gct gat gtg cac cga caa gtg gcc att 1488  
Ala Arg Gly Ser Phe Ser Gln Ala Asp Val His Arg Gln Val Ala Ile  
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gtg ttc cgg acc cct ccc tac gca gac ccc agc ctg cag gct cct gtg 1536  
Val Phe Arg Thr Pro Pro Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val  
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cgt gtc tcc atg cag ctg cgg cgg cct tcc gac cgg gag ctc agt gag 1584  
Arg Val Ser Met Gln Leu Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu  
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ccc atg gaa ttc cag tac ctg cca gat aca gac gat cgt cac cgg att 1632  
Pro Met Glu Phe Gln Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile  
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Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys  
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Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg  
565 570 575

att gct gtg cct tcc cgc agc tca gct tct gtc ccc aag cca gca ccc 1776  
Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro  
580 585 590

cag ccc tat ccc ttt acg tca tcc ctg agc acc atc aac tat gat gag 1824  
Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu  
595 600 605

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 Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala  
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cca gtc cta gcc cca ggc cct cct cag gct gtg gcc cca cct gcc ccc 2016  
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 Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr  
 690 695 700

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 Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu Phe  
 705 710 715 720

cag cag ctg ctg aac cag ggc ata cct gtg gcc ccc cac aca act gag 2208  
 Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr Glu  
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ccc atg ctg atg gag tac cct gag gct ata act cgc cta gtg aca ggg 2256  
 Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr Gly  
 740 745 750

gcc cag agg ccc ccc gac cca gct cct gct cca ctg ggg gcc ccg ggg 2304  
 Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly  
 755 760 765



gac atg gac ttc tca gcc ctg ctg agt cag atc agc tcc taa 2394  
Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile Ser Ser \*  
785 790 795

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			20					25					30		
Glu	Gly	Glu	Gly	Asp	Ala	Thr	Tyr	Gly	Lys	Leu	Thr	Leu	Lys	Phe	Ile
		35					40					45			
Cys	Thr	Thr	Gly	Lys	Leu	Pro	Val	Pro	Trp	Pro	Thr	Leu	Val	Thr	Thr
	50					55					60				
Leu	Thr	Tyr	Gly	Val	Gln	Cys	Phe	Ser	Arg	Tyr	Pro	Asp	His	Met	Lys
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Gln	His	Asp	Phe	Phe	Lys	Ser	Ala	Met	Pro	Glu	Gly	Tyr	Val	Gln	Glu
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Arg	Thr	Ile	Phe	Phe	Lys	Asp	Asp	Gly	Asn	Tyr	Lys	Thr	Arg	Ala	Glu
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Val	Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	Glu	Leu	Lys	Gly
		115					120					125			
Ile	Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	Gly	His	Lys	Leu	Glu	Tyr
	130					135					140				
Asn	Tyr	Asn	Ser	His	Asn	Val	Tyr	Ile	Met	Ala	Asp	Lys	Gln	Lys	Asn
145				150					155					160	
Gly	Ile	Lys	Val	Asn	Phe	Lys	Ile	Arg	His	Asn	Ile	Glu	Asp	Gly	Ser
			165					170						175	
Val	Gln	Leu	Ala	Asp	His	Tyr	Gln	Gln	Asn	Thr	Pro	Ile	Gly	Asp	Gly
		180						185					190		

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu  
 195 200 205  
 Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe  
 210 215 220  
 Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser  
 225 230 235 240  
 Gly Leu Arg Ser Arg Ala Met Asp Glu Leu Phe Pro Leu Ile Phe Pro  
 245 250 255  
 Ala Glu Pro Ala Gln Ala Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln  
 260 265 270  
 Pro Lys Gln Arg Gly Met Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser  
 275 280 285  
 Ala Gly Ser Ile Pro Gly Glu Arg Ser Thr Asp Thr Thr Lys Thr His  
 290 295 300  
 Pro Thr Ile Lys Ile Asn Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile  
 305 310 315 320  
 Ser Leu Val Thr Lys Asp Pro Pro His Arg Pro His Pro His Glu Leu  
 325 330 335  
 Val Gly Lys Asp Cys Arg Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro  
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 Asp Arg Cys Ile His Ser Phe Gln Asn Leu Gly Ile Gln Cys Val Lys  
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 Lys Arg Asp Leu Glu Gln Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn  
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 Asn Pro Phe Gln Val Pro Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu  
 385 390 395 400  
 Asn Ala Val Arg Leu Cys Phe Gln Val Thr Val Arg Asp Pro Ser Gly  
 405 410 415  
 Arg Pro Leu Arg Leu Pro Pro Val Leu Pro His Pro Ile Phe Asp Asn  
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 Arg Ala Pro Asn Thr Ala Glu Leu Lys Ile Cys Arg Val Asn Arg Asn  
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 Ser Gly Ser Cys Leu Gly Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys  
 450 455 460  
 Val Gln Lys Glu Asp Ile Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu  
 465 470 475 480  
 Ala Arg Gly Ser Phe Ser Gln Ala Asp Val His Arg Gln Val Ala Ile  
 485 490 495  
 Val Phe Arg Thr Pro Pro Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val  
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Arg Val Ser Met Gln Leu Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu  
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 Pro Met Glu Phe Gln Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile  
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 565 570 575  
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 Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val  
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 Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr Glu  
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 Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly  
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 Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala  
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&lt;213&gt; Aequorea victoria and human

&lt;220&gt;

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Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln Pro Lys Gln Arg Gly Met	
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cgc ttc cgc tac aag tgc gag ggg cgc tcc gcg ggc agc atc cca gcc	144
Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly	
35 40 45	
gag agg agc aca gat acc acc aag acc cac ccc acc atc aag atc aat	192
Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn	
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ggc tac aca gga cca ggg aca gtg cgc atc tcc ctg gtc acc aag gac	240
Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile Ser Leu Val Thr Lys Asp	
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cct cct cac cgg cct cac ccc cac gag ctt gta gga aag gac tgc cgg	288
Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg	
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gat ggc ttc tat gag gct gag ctc tgc ccg gac cgc tgc atc cac agt	336
Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser	
100 105 110	
ttc cag aac ctg gga atc cag tgt gtg aag aag cgg gac ctg gag cag	384
Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln	
115 120 125	
gct atc agt cag cgc atc cag acc aac aac aac ccc ttc caa gtt cct	432

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ata	gaa	gag	cag	cgt	ggg	gac	tac	gac	ctg	aat	gct	gtg	cgg	ctc	tgc	480
Ile	Glu	Glu	Gln	Arg	Gly	Asp	Tyr	Asp	Leu	Asn	Ala	Val	Arg	Leu	Cys	
145					150					155					160	
ttc	cag	gtg	aca	gtg	cgg	gac	cca	tca	ggc	agg	ccc	ctc	cgc	ctg	ccg	528
Phe	Gln	Val	Thr	Val	Arg	Asp	Pro	Ser	Gly	Arg	Pro	Leu	Arg	Leu	Pro	
				165					170					175		
cct	gtc	ctt	cct	cat	ccc	atc	ttt	gac	aat	cgt	gcc	ccc	aac	act	gcc	576
Pro	Val	Leu	Pro	His	Pro	Ile	Phe	Asp	Asn	Arg	Ala	Pro	Asn	Thr	Ala	
				180				185					190			
gag	ctc	aag	atc	tgc	cga	gtg	aac	cga	aac	tct	ggc	agc	tgc	ctc	ggc	624
Glu	Leu	Lys	Ile	Cys	Arg	Val	Asn	Arg	Asn	Ser	Gly	Ser	Cys	Leu	Gly	
		195					200					205				
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Gly	Asp	Glu	Ile	Phe	Leu	Leu	Cys	Asp	Lys	Val	Gln	Lys	Glu	Asp	Ile	
	210					215					220					
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Glu	Val	Tyr	Phe	Thr	Gly	Pro	Gly	Trp	Glu	Ala	Arg	Gly	Ser	Phe	Ser	
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caa	gct	gat	gtg	cac	cga	caa	gtg	gcc	att	gtg	ttc	cgg	acc	cct	ccc	768
Gln	Ala	Asp	Val	His	Arg	Gln	Val	Ala	Ile	Val	Phe	Arg	Thr	Pro	Pro	
				245				250					255			
tac	gca	gac	ccc	agc	ctg	cag	gct	cct	gtg	cgt	gtc	tcc	atg	cag	ctg	816
Tyr	Ala	Asp	Pro	Ser	Leu	Gln	Ala	Pro	Val	Arg	Val	Ser	Met	Gln	Leu	
			260				265					270				
cgg	cgg	cct	tcc	gac	cgg	gag	ctc	agt	gag	ccc	atg	gaa	ttc	cag	tac	864
Arg	Arg	Pro	Ser	Asp	Arg	Glu	Leu	Ser	Glu	Pro	Met	Glu	Phe	Gln	Tyr	
		275					280					285				
ctg	cca	gat	aca	gac	gat	cgt	cac	cgg	att	gag	gag	aaa	cgt	aaa	agg	912

Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg  
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aca tat gag acc ttc aag agc atc atg aag aag agt cct ttc agc gga 960  
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gaa gga acg ctg tca gag gcc ctg ctg cag ctg cag ttt gat gat gaa 1344  
 Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu  
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gac ctg ggg gcc ttg ctt ggc aac agc aca gac cca gct gtg ttc aca 1392

Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr  
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gac ctg gca tcc gtc gac aac tcc gag ttt cag cag ctg ctg aac cag 1440  
 Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln  
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 Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr  
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 Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu  
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acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc ctg acc 1872

Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Thr  
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 660 665 670

ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc atc gac 2064  
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 675 680 685

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 Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr  
 690 695 700

aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac ggc atc 2160  
 Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile  
 705 710 715 720

aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc gtg cag 2208  
 Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln  
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ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc ccc gtg 2256  
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gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc gtg acc 2352



Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr  
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<211> 797

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<213> Aequorea victoria and human

<400> 16

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 Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln Pro Lys Gln Arg Gly Met  
 20 25 30  
 Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly  
 35 40 45  
 Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn  
 50 55 60  
 Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile Ser Leu Val Thr Lys Asp  
 65 70 75 80  
 Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg  
 85 90 95  
 Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser  
 100 105 110  
 Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln  
 115 120 125  
 Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro  
 130 135 140  
 Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys  
 145 150 155 160  
 Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro  
 165 170 175  
 Pro Val Leu Pro His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala  
 180 185 190  
 Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly  
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Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile  
 210 215 220  
 Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser  
 225 230 235 240  
 Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro  
 245 250 255  
 Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu  
 260 265 270  
 Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr  
 275 280 285  
 Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg  
 290 295 300  
 Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly  
 305 310 315 320  
 Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg  
 325 330 335  
 Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr  
 340 345 350  
 Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe  
 355 360 365  
 Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro  
 370 375 380  
 Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val  
 385 390 395 400  
 Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly  
 405 410 415  
 Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly  
 420 425 430  
 Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu  
 435 440 445  
 Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr  
 450 455 460  
 Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln  
 465 470 475 480  
 Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr  
 485 490 495  
 Pro Glu Ala Ile Thr Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp  
 500 505 510  
 Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu  
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Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala  
 530 535 540  
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 Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu  
 565 570 575  
 Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly  
 580 585 590  
 Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr  
 595 600 605  
 Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Thr  
 610 615 620  
 Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His  
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 Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr  
 645 650 655  
 Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys  
 660 665 670  
 Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp  
 675 680 685  
 Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr  
 690 695 700  
 Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile  
 705 710 715 720  
 Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln  
 725 730 735  
 Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val  
 740 745 750  
 Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys  
 755 760 765  
 Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr  
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 Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys  
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&lt;210&gt; 17

&lt;211&gt; 2757

&lt;212&gt; DNA

&lt;213&gt; Aequorea victoria and human

<220>

<221> CDS

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gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc 96  
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly  
20 25 30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc 144  
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile  
35 40 45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc 192  
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr  
50 55 60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag 240  
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys  
65 70 75 80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag 288  
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu  
85 90 95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag 336  
 Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu  
 100 105 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc 384  
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly  
115 120 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac 432  
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr  
130 135 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac 480  
 Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn  
 145 150 155 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc 528  
 Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser  
 165 170 175

gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc 576  
 Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly  
 180 185 190

ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg 624  
 Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu  
 195 200 205

agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc 672  
 Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe  
 210 215 220

gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc 720  
 Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser  
 225 230 235 240

gga ctc aga tct cga ggc aag atg gct gac ccg gct gcg ggg ccg ccg 768  
 Gly Leu Arg Ser Arg Gly Lys Met Ala Asp Pro Ala Ala Gly Pro Pro  
 245 250 255

ccg agc gag ggc gag gag agc acc gtg cgc ttc gcc cgc aaa ggc gcc 816  
 Pro Ser Glu Gly Glu Glu Ser Thr Val Arg Phe Ala Arg Lys Gly Ala  
 260 265 270

ctc cgg cag aag aac gtg cat gag gtc aag aac cac aaa ttc acc gcc 864  
 Leu Arg Gln Lys Asn Val His Glu Val Lys Asn His Lys Phe Thr Ala  
 275 280 285

cgc ttc ttc aag cag ccc acc ttc tgc agc cac tgc acc gac ttc atc 912  
 Arg Phe Phe Lys Gln Pro Thr Phe Cys Ser His Cys Thr Asp Phe Ile  
 290 295 300

tgg ggc ttc ggg aag cag gga ttc cag tgc caa gtt tgc tgc ttt gtg	960
Trp Gly Phe Gly Lys Gln Gly Phe Gln Cys Gln Val Cys Cys Phe Val	
305                      310                      315                      320	
gtg cac aag cgg tgc cat gaa ttt gtc aca ttc tcc tgc cct ggc gct	1008
Val His Lys Arg Cys His Glu Phe Val Thr Phe Ser Cys Pro Gly Ala	
325                      330                      335	
gac aag ggt cca gcc tcc gat gac ccc cgc agc aaa cac aag ttt aag	1056
Asp Lys Gly Pro Ala Ser Asp Asp Pro Arg Ser Lys His Lys Phe Lys	
340                      345                      350	
atc cac acg tac tcc agc ccc acg ttt tgt gac cac tgt ggg tca ctg	1104
Ile His Thr Tyr Ser Ser Pro Thr Phe Cys Asp His Cys Gly Ser Leu	
355                      360                      365	
ctg tat gga ctc atc cac cag ggg atg aaa tgt gac acc tgc atg atg	1152
Leu Tyr Gly Leu Ile His Gln Gly Met Lys Cys Asp Thr Cys Met Met	
370                      375                      380	
aat gtg cac aag cgc tgc gtg atg aat gtt ccc agc ctg tgt ggc acg	1200
Asn Val His Lys Arg Cys Val Met Asn Val Pro Ser Leu Cys Gly Thr	
385                      390                      395                      400	
gac cac acg gag cgc cgc ggc cgc atc tac atc cag gcc cac atc gac	1248
Asp His Thr Glu Arg Arg Gly Arg Ile Tyr Ile Gln Ala His Ile Asp	
405                      410                      415	
agg gac gtc ctc att gtc ctc gta aga gat gct aaa aac ctt gta cct	1296
Arg Asp Val Leu Ile Val Leu Val Arg Asp Ala Lys Asn Leu Val Pro	
420                      425                      430	
atg gac ccc aat ggc ctg tca gat ccc tac gta aaa ctg aaa ctg att	1344
Met Asp Pro Asn Gly Leu Ser Asp Pro Tyr Val Lys Leu Lys Leu Ile	
435                      440                      445	
ccc gat ccc aaa agt gag agc aaa cag aag acc aaa acc atc aaa tgc	1392
Pro Asp Pro Lys Ser Glu Ser Lys Gln Lys Thr Lys Thr Ile Lys Cys	
450                      455                      460	

tcc ctc aac cct gag tgg aat gag aca ttt aga ttt cag ctg aaa gaa	1440
Ser Leu Asn Pro Glu Trp Asn Glu Thr Phe Arg Phe Gln Leu Lys Glu	
465 470 475 480	
tcg gac aaa gac aga aga ctg tca gta gag att tgg gat tgg gat ttg	1488
Ser Asp Lys Asp Arg Arg Leu Ser Val Glu Ile Trp Asp Trp Asp Leu	
485 490 495	
acc agc agg aat gac ttc atg gga tct ttg tcc ttt ggg att tct gaa	1536
Thr Ser Arg Asn Asp Phe Met Gly Ser Leu Ser Phe Gly Ile Ser Glu	
500 505 510	
ctt cag aag gcc agt gtt gat ggc tgg ttt aag tta ctg agc cag gag	1584
Leu Gln Lys Ala Ser Val Asp Gly Trp Phe Lys Leu Leu Ser Gln Glu	
515 520 525	
gaa ggc gag tac ttc aat gtg cct gtg cca cca gaa gga agt gag gcc	1632
Glu Gly Glu Tyr Phe Asn Val Pro Val Pro Pro Glu Gly Ser Glu Ala	
530 535 540	
aat gaa gaa ctg cgg cag aaa ttt gag agg gcc aag atc agt cag gga	1680
Asn Glu Glu Leu Arg Gln Lys Phe Glu Arg Ala Lys Ile Ser Gln Gly	
545 550 555 560	
acc aag gtc ccg gaa gaa aag acg acc aac act gtc tcc aaa ttt gac	1728
Thr Lys Val Pro Glu Glu Lys Thr Thr Asn Thr Val Ser Lys Phe Asp	
565 570 575	
aac aat ggc aac aga gac cgg atg aaa ctg acc gat ttt aac ttc cta	1776
Asn Asn Gly Asn Arg Asp Arg Met Lys Leu Thr Asp Phe Asn Phe Leu	
580 585 590	
atg gtg ctg ggg aaa ggc agc ttt ggc aag gtc atg ctt tca gaa cga	1824
Met Val Leu Gly Lys Gly Ser Phe Gly Lys Val Met Leu Ser Glu Arg	
595 600 605	
aaa ggc aca gat gag ctc tat gct gtg aag atc ctg aag aag gac gtt	1872
Lys Gly Thr Asp Glu Leu Tyr Ala Val Lys Ile Leu Lys Lys Asp Val	
610 615 620	





cag gca ccc ttt gaa ggg gag gat gaa gat gaa ctc ttc caa tcc atc 2400  
 Gln Ala Pro Phe Glu Gly Glu Asp Glu Asp Glu Leu Phe Gln Ser Ile  
 785 790 795 800

atg gaa cac aac gta gcc tat ccc aag tct atg tcc aag gaa gct gtg 2448  
 Met Glu His Asn Val Ala Tyr Pro Lys Ser Met Ser Lys Glu Ala Val  
 805 810 815

gcc atc tgc aaa ggg ctg atg acc aaa cac cca ggc aaa cgt ctg ggt 2496  
 Ala Ile Cys Lys Gly Leu Met Thr Lys His Pro Gly Lys Arg Leu Gly  
 820 825 830

tgt gga cct gaa ggc gaa cgt gat atc aaa gag cat gca ttt ttc cgg 2544  
 Cys Gly Pro Glu Gly Glu Arg Asp Ile Lys Glu His Ala Phe Phe Arg  
 835 840 845

tat att gat tgg gag aaa ctt gaa cgc aaa gag atc cag ccc cct tat 2592  
 Tyr Ile Asp Trp Glu Lys Leu Glu Arg Lys Glu Ile Gln Pro Pro Tyr  
 850 855 860

aag cca aaa gct aga gac aag aga gac acc tcc aac ttc gac aaa gag 2640  
 Lys Pro Lys Ala Arg Asp Lys Arg Asp Thr Ser Asn Phe Asp Lys Glu  
 865 870 875 880

ttc acc aga cag cct gtg gaa ctg acc ccc act gat aaa ctc ttc atc 2688  
 Phe Thr Arg Gln Pro Val Glu Leu Thr Pro Thr Asp Lys Leu Phe Ile  
 885 890 895

atg aac ttg gac caa aat gaa ttt gct ggc ttc tct tat act aac cca 2736  
 Met Asn Leu Asp Gln Asn Glu Phe Ala Gly Phe Ser Tyr Thr Asn Pro  
 900 905 910

gag ttt gtc att aat gtg tag 2757  
 Glu Phe Val Ile Asn Val \*  
 915

&lt;210&gt; 18

&lt;211&gt; 918

<213> Aequorea victoria and human

<400> 18

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Val	Glu	Leu	Asp	Gly	Asp	Val	Asn	Gly	His	Lys	Phe	Ser	Val	Ser	Gly
			20					25					30		
Glu	Gly	Glu	Gly	Asp	Ala	Thr	Tyr	Gly	Lys	Leu	Thr	Leu	Lys	Phe	Ile
			35					40					45		
Cys	Thr	Thr	Gly	Lys	Leu	Pro	Val	Pro	Trp	Pro	Thr	Leu	Val	Thr	Thr
			50				55					60			
Leu	Thr	Tyr	Gly	Val	Gln	Cys	Phe	Ser	Arg	Tyr	Pro	Asp	His	Met	Lys
65					70					75					80
Gln	His	Asp	Phe	Phe	Lys	Ser	Ala	Met	Pro	Glu	Gly	Tyr	Val	Gln	Glu
				85						90					95
Arg	Thr	Ile	Phe	Phe	Lys	Asp	Asp	Gly	Asn	Tyr	Lys	Thr	Arg	Ala	Glu
			100						105					110	
Val	Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	Glu	Leu	Lys	Gly
			115						120				125		
Ile	Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	Gly	His	Lys	Leu	Glu	Tyr
			130				135					140			
Asn	Tyr	Asn	Ser	His	Asn	Val	Tyr	Ile	Met	Ala	Asp	Lys	Gln	Lys	Asn
145					150						155				160
Gly	Ile	Lys	Val	Asn	Phe	Lys	Ile	Arg	His	Asn	Ile	Glu	Asp	Gly	Ser
				165						170					175
Val	Gln	Leu	Ala	Asp	His	Tyr	Gln	Gln	Asn	Thr	Pro	Ile	Gly	Asp	Gly
			180						185					190	
Pro	Val	Leu	Leu	Pro	Asp	Asn	His	Tyr	Leu	Ser	Thr	Gln	Ser	Ala	Leu
			195					200					205		
Ser	Lys	Asp	Pro	Asn	Glu	Lys	Arg	Asp	His	Met	Val	Leu	Leu	Glu	Phe
			210				215					220			
Val	Thr	Ala	Ala	Gly	Ile	Thr	Leu	Gly	Met	Asp	Glu	Leu	Tyr	Lys	Ser
225					230					235					240
Gly	Leu	Arg	Ser	Arg	Gly	Lys	Met	Ala	Asp	Pro	Ala	Ala	Gly	Pro	Pro
				245						250					255
Pro	Ser	Glu	Gly	Glu	Glu	Ser	Thr	Val	Arg	Phe	Ala	Arg	Lys	Gly	Ala
			260						265					270	
Leu	Arg	Gln	Lys	Asn	Val	His	Glu	Val	Lys	Asn	His	Lys	Phe	Thr	Ala
			275						280						285

Arg Phe Phe Lys Gln Pro Thr Phe Cys Ser His Cys Thr Asp Phe Ile  
 290 295 300  
 Trp Gly Phe Gly Lys Gln Gly Phe Gln Cys Gln Val Cys Cys Phe Val  
 305 310 315 320  
 Val His Lys Arg Cys His Glu Phe Val Thr Phe Ser Cys Pro Gly Ala  
 325 330 335  
 Asp Lys Gly Pro Ala Ser Asp Asp Pro Arg Ser Lys His Lys Phe Lys  
 340 345 350  
 Ile His Thr Tyr Ser Ser Pro Thr Phe Cys Asp His Cys Gly Ser Leu  
 355 360 365  
 Leu Tyr Gly Leu Ile His Gln Gly Met Lys Cys Asp Thr Cys Met Met  
 370 375 380  
 Asn Val His Lys Arg Cys Val Met Asn Val Pro Ser Leu Cys Gly Thr  
 385 390 395 400  
 Asp His Thr Glu Arg Arg Gly Arg Ile Tyr Ile Gln Ala His Ile Asp  
 405 410 415  
 Arg Asp Val Leu Ile Val Leu Val Arg Asp Ala Lys Asn Leu Val Pro  
 420 425 430  
 Met Asp Pro Asn Gly Leu Ser Asp Pro Tyr Val Lys Leu Lys Leu Ile  
 435 440 445  
 Pro Asp Pro Lys Ser Glu Ser Lys Gln Lys Thr Lys Thr Ile Lys Cys  
 450 455 460  
 Ser Leu Asn Pro Glu Trp Asn Glu Thr Phe Arg Phe Gln Leu Lys Glu  
 465 470 475 480  
 Ser Asp Lys Asp Arg Arg Leu Ser Val Glu Ile Trp Asp Trp Asp Leu  
 485 490 495  
 Thr Ser Arg Asn Asp Phe Met Gly Ser Leu Ser Phe Gly Ile Ser Glu  
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 Glu Gly Glu Tyr Phe Asn Val Pro Val Pro Pro Glu Gly Ser Glu Ala  
 530 535 540  
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 545 550 555 560  
 Thr Lys Val Pro Glu Glu Lys Thr Thr Asn Thr Val Ser Lys Phe Asp  
 565 570 575  
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 580 585 590  
 Met Val Leu Gly Lys Gly Ser Phe Gly Lys Val Met Leu Ser Glu Arg  
 595 600 605

Lys Gly Thr Asp Glu Leu Tyr Ala Val Lys Ile Leu Lys Lys Asp Val  
 610 615 620  
 Val Ile Gln Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val  
 625 630 635 640  
 Leu Ala Leu Pro Gly Lys Pro Pro Phe Leu Thr Gln Leu His Ser Cys  
 645 650 655  
 Phe Gln Thr Met Asp Arg Leu Tyr Phe Val Met Glu Tyr Val Asn Gly  
 660 665 670  
 Gly Asp Leu Met Tyr His Ile Gln Gln Val Gly Arg Phe Lys Glu Pro  
 675 680 685  
 His Ala Val Phe Tyr Ala Ala Glu Ile Ala Ile Gly Leu Phe Phe Leu  
 690 695 700  
 Gln Ser Lys Gly Ile Ile Tyr Arg Asp Leu Lys Leu Asp Asn Val Met  
 705 710 715 720  
 Leu Asp Ser Glu Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys  
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 Glu Asn Ile Trp Asp Gly Val Thr Thr Lys Thr Phe Cys Gly Thr Pro  
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 Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr Gln Pro Tyr Gly Lys Ser  
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 Met Glu His Asn Val Ala Tyr Pro Lys Ser Met Ser Lys Glu Ala Val  
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 Ala Ile Cys Lys Gly Leu Met Thr Lys His Pro Gly Lys Arg Leu Gly  
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 Cys Gly Pro Glu Gly Glu Arg Asp Ile Lys Glu His Ala Phe Phe Arg  
 835 840 845  
 Tyr Ile Asp Trp Glu Lys Leu Glu Arg Lys Glu Ile Gln Pro Pro Tyr  
 850 855 860  
 Lys Pro Lys Ala Arg Asp Lys Arg Asp Thr Ser Asn Phe Asp Lys Glu  
 865 870 875 880  
 Phe Thr Arg Gln Pro Val Glu Leu Thr Pro Thr Asp Lys Leu Phe Ile  
 885 890 895  
 Met Asn Leu Asp Gln Asn Glu Phe Ala Gly Phe Ser Tyr Thr Asn Pro  
 900 905 910  
 Glu Phe Val Ile Asn Val  
 915